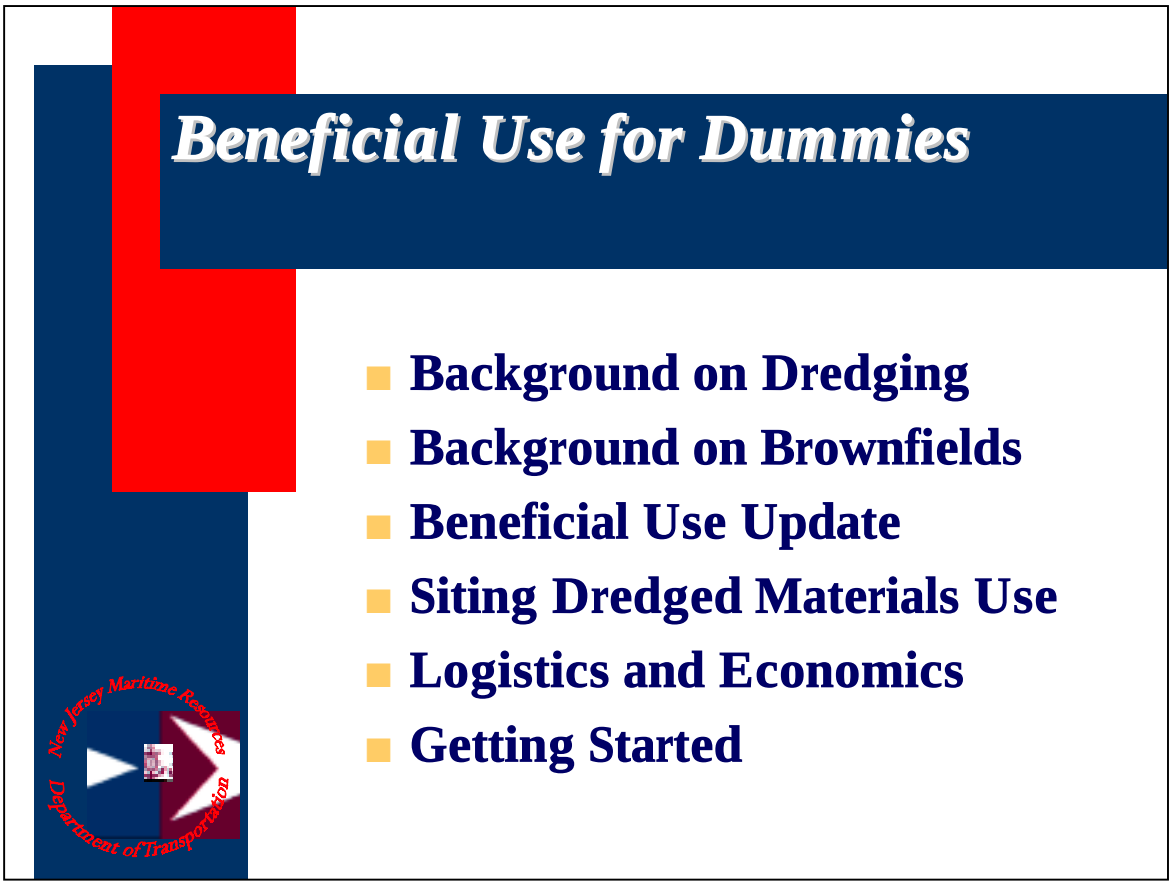
Welcome

Renee has asked me to give you a primer in brownfields and dredged material. Are they, as we like to say in NJ, "perfect together"? Well, it may not be as easy as a trip to Long Beach Island, it could be a little more like a bad trip to Atlantic City, but with a little background, I think you will be able to see the benefits of using dredged material in your project.

As always, I would like to acknowledge the hard work and creativity put into this program by my friends and collegues at NJMR and the staff of the Office of Dredging and Sediment Technology of the NJDEP.



I'm going to start with some basic facts about dredging and dredged materials in the Port of NY and NJ, then switch over and discuss brownfields in NJ. After we are all equally confused, I will give you an update on beneficial use of dredged materials in the region. Then I want to move ahead and help give you some of the information you will need if you are considering using dredged materials in a remediation project.

The NY Bight is home to the Port of NY and NJ, the largest port on the east coast and home to over 15 million people. As one of the premier container ports and the largest petroleum distribution hubs in the country, the Port utilizes over 250 miles of engineered waterways. While modern maritime vessels typically require depths of 45 feet or more, the natural depth of the Port is only 19 feet. This means that between 2 and 4 million cubic yards of sediment must be dredged each year. As if this wasn't daunting enough, the Port also lies in the oldest industrialized watershed in the country. If a mistake could have been made handling chemicals in the country, it was made here first…..

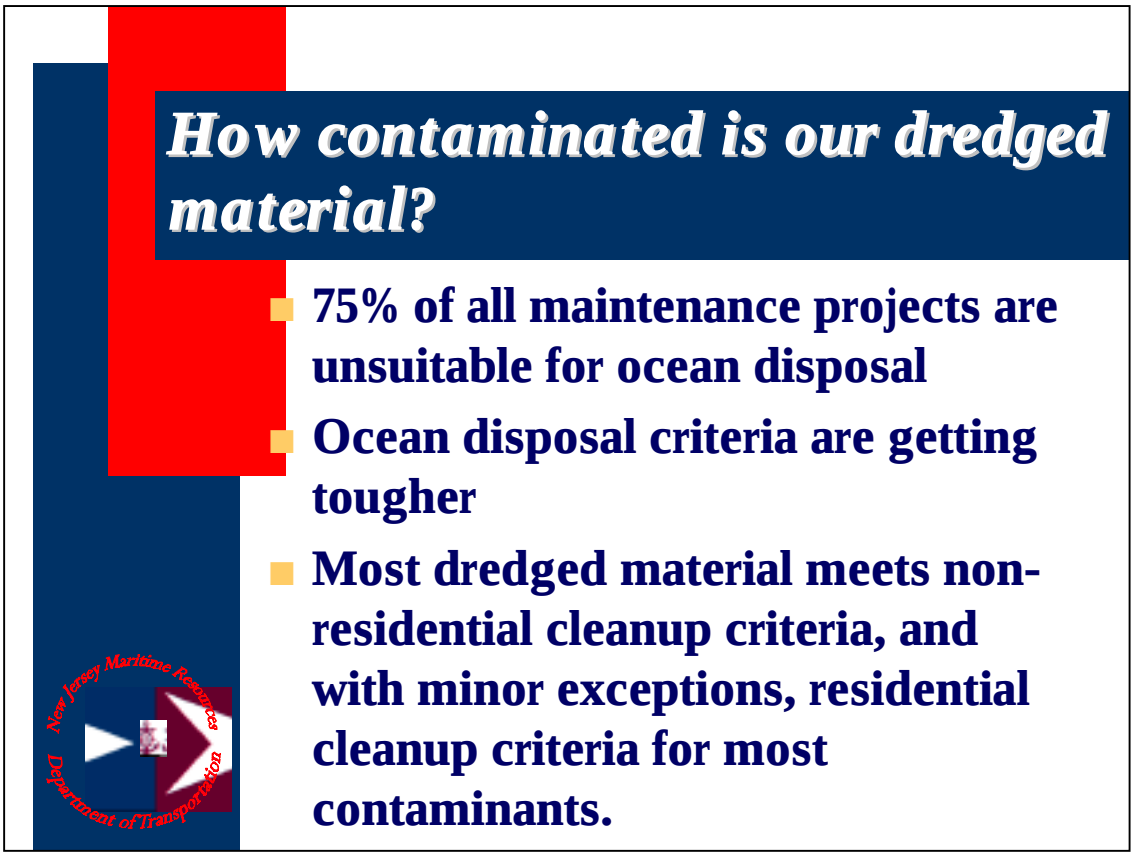
Up until about 10 years ago, the Port disposed of its dredged material in a big pile out off Sandy Hook. In 1992, with the publishing of new ocean disposal testing guidelines from the Corps and the USEPA, the Port realized that use of the old "Mud Dump" as it was then called would be severely limited in the future. While the region argued over what this might mean, the Port Authority found themselves pitted against the environmental community over a "grandfathered" maintenance project and the fallout from this lawsuit resulted in, what we now refer to as "Mudlock". The short version of the story is that we were going to need a new strategy to manage our dredged materials if the Port was going to survive.

Projected Dredging Needs

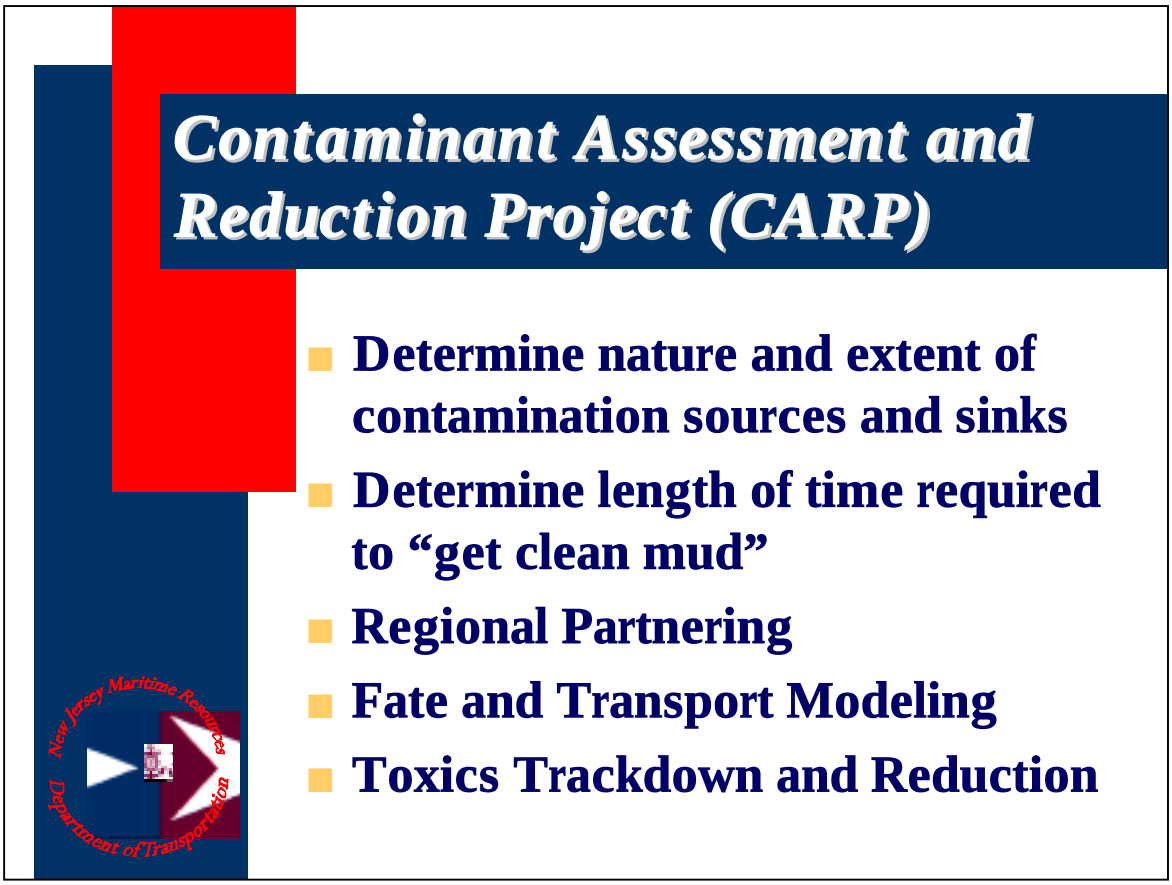
	1999-2005	2006-2010	2011-2040	
Rock	3.208	3.975	0	
Clean				
O&M	6.373	2.573	37.159	(1.24/yr)
Deepening	26.265	15.73	1.58	
Contaminated				
O&M	7.65	6.363	27.4	(0.91/yr)
Deepening	7.795	2.756	1.825	

To add to the concern, there were two major deepening projects planned for the coming decades, one to deepen the major arteries to 45 feet and the other to deepen to 50 feet. This would result in the need to move up to 5 million additional yards a year. Reliable, cost-effective management options had never been more necessary.

In order to resolve the problem, the Corps formed a Regional Dredging Team that came up with a Dredged Material Management Plan that was not only approved by both States and the Port Authority, but provides a very detailed roadmap for the future. The 4 main goals for managing dredged materials in the Port are 1) we need to minimize our dredging requirements, 2) we need to clean up the mud as much as we can, 3) we must beneficially use as much as possible and 4) we dispose of only what we cannot use. This policy has been taken to heart by the State of NJ and are the guiding principles for everything we are doing in the harbor.

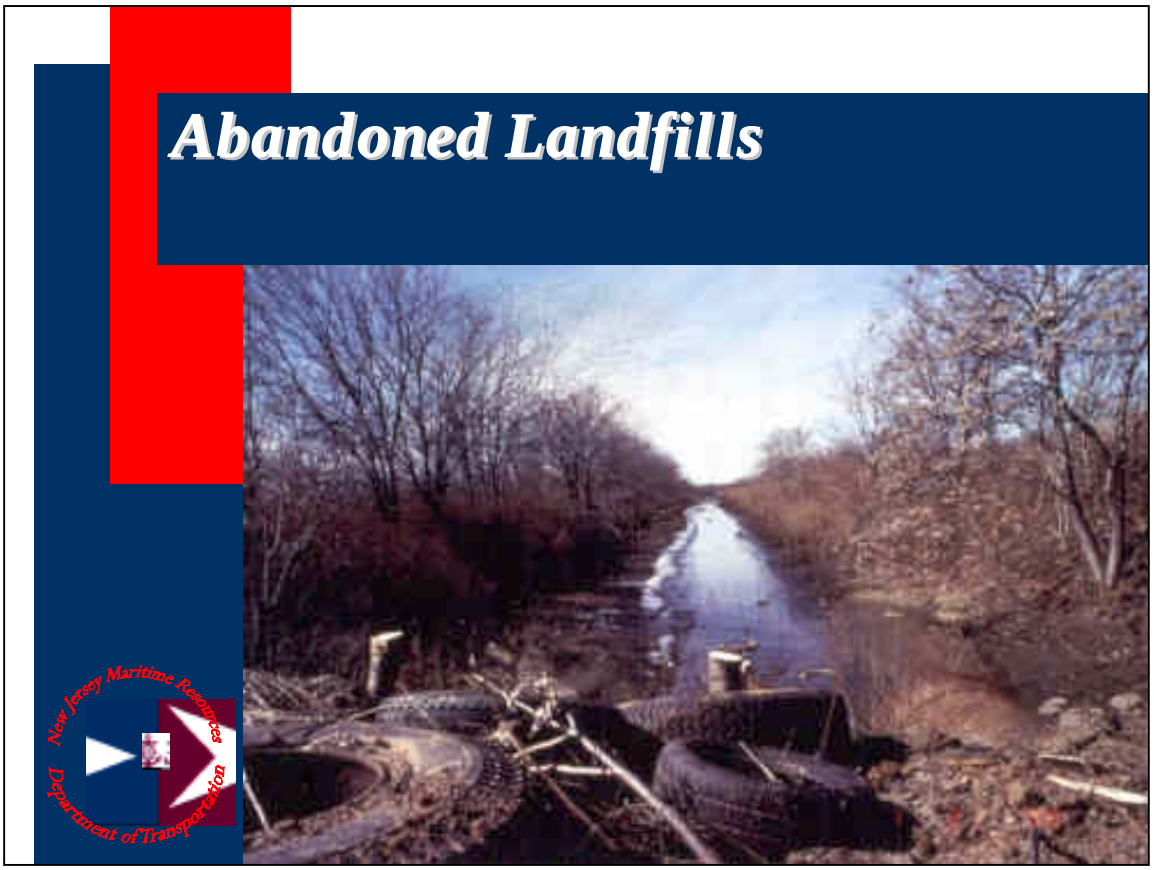


Sediments serve as the cleanup mechanism for polluted water. Given that millions of people have been misusing the harbor for over 150 years, the sediments in NY/NJ Harbor are not clean. Many locations are toxic to marine life, making sediments dredged from those locations unsuitable for ocean disposal. As dirty as our sediments are, however, they are not hazardous waste. In NJ, they aren't even solid waste. In fact, when removed from the sensitive aquatic system, the sediments are relatively benign compared to most of the soils in the area. While there is a whole lot of variability in the material, most dredged materials meet New Jerseys non-residential soil cleanup criteria, and for many constituents is clean enough to meet residential criteria. That's not to say that there are not very contaminated sediments out there. There are. But those sediments are either buried deeply or located in areas without navigation channels.



So what are we doing about cleaning up our mud? The system is highly complex and, unfortunately, poorly understood. NJMR is working with the NJDEP, NYDEC, the Corps, EPA and the Hudson River Foundation on an ambitious project called the Contaminant Assessment and Reduction Project or CARP. CARP is a working group of the Harbor Estuary Program, or HEP. While we are likely years from being able to answer even the basic questions, this program is certainly a model of regional partnering and long range environmental planning. For more information, check out HRFs website.

Lets talk about some of the sources of contamination to the harbor and how brownfields fit in. While we have been very successful at cleaning up point source pollution (with the exception of CSO's), we have not been successful at identifying and reducing nonpoint or historical sources. And given that the harbor has been extensively used and misused for over 150 years, there are a LOT of these sources. We know that many abandoned industrial property, or "brownfields" are a major source of continuing contamination, both to surfacewater and to sediments through stormwater runoff and during seasonal flooding events. The real estate transfer laws in NJ, developed to prevent transfer of polluted properties, has had the unintended consequence of companies simply walk away from old industrial properties rather than face high clean up costs. New laws in NJ now encourage volunteer cleanup of these sites, and offer protections to new owners.



Another important source of pollutants is abandoned landfills. There are numerous sites across NJ that were closed or abandoned before the sanitary waste laws were enacted. These sites have little or no closure funds, and in many cases the responsible parties are municipalities. In the Hackensack Meadowlands there are eleven abandoned landfills, and the NJDEP has estimated that these landfills generate over 400,000 gallons of contaminated leachate per acre per year.

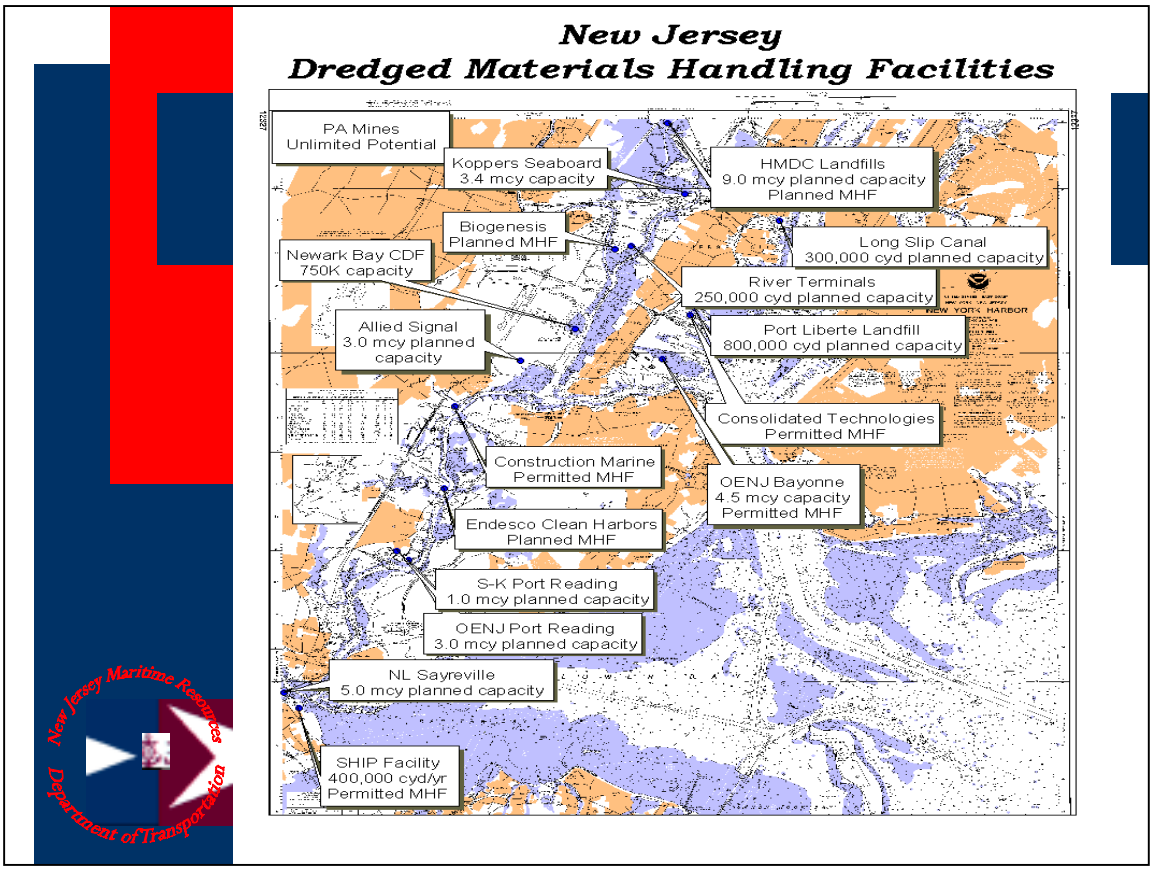
Just how many of these sites are there in NJ? The NJDEP Site Remediation Program has identified over 7,000 sites, ranging from Mom and Pop gas stations to full blown Superfund sites. No one knows just how much these sites contribute to the ongoing pollution of the harbor. Given the sheer number of these sites in the Port, it is obvious that any restoration plan for sediments will require addressing the brownfields issue.

Beneficial Use: Solving Two Problems at Once

One of the strategies that NJMR is known for are "win-win" solutions to these complex problems. We believe that combining our dredged materials management requirements with our need to remediate contaminated properties has the makings of just such a partnership. For years now, engineers have known that sediments can be stabilized with lime kiln dust, fly ash, or Portland cement to increase the pH, dewater, and produce a product that is leachate free. This product can then be used to cap and fill contaminated properties, thereby reducing pollutant migration into the harbor.

One of the most successful beneficial use projects to date was the OENJ demonstration project at the Elizabeth Landfill. Using a variety of recycled materials, including 800,000 cyd of amended dredged materials, OENJ capped and graded the site, installed a leachate collection system, and sold the property to a developer. When fully developed, the Jersey Gardens Mall and office complex will provide over 5,000 jobs and generate over $6 million in annual revenues to the City of Elizabeth.

In the spring of 2000, the first permanent dredged materials handling facility went on line in Jersey City. The facility is permitted to process material for any placement option, and has its own dewatering discharge permit. CTI claims that they are capable of handling 5 to 10,000 cyd a day, but so far have operated below that level. An additional shift, experience, and a more secure material stream will likely result in greater efficiency. We'll be watching them closely when they start up operations again this summer.



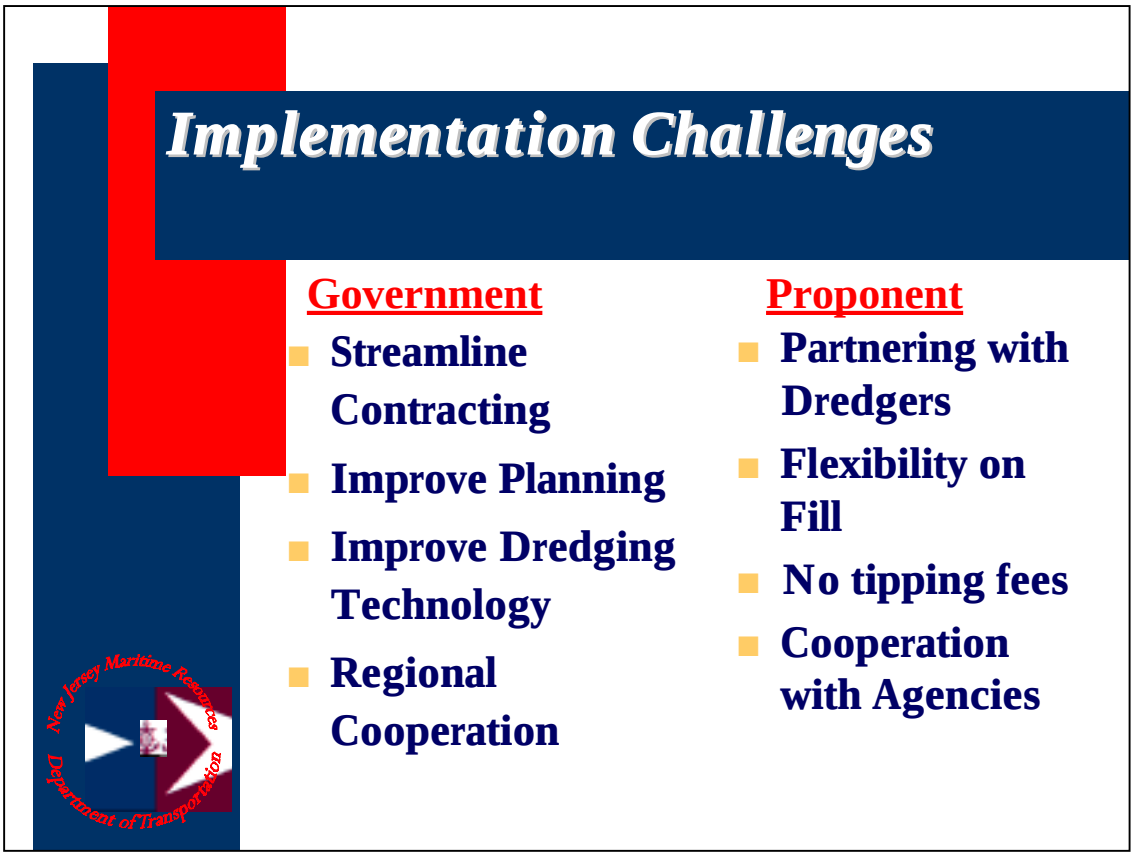
And we have identified numerous other sites throughout the Port. These locations are in various states of completion. But given the lack of longterm contracts for dredged materials, will be fully permitted only as the immediate need arises. And this means either imminent bids or visible movement on the part of the Corps. Realize that for the past two years, very little material, less than 250,000 cyd has moved upland.

So you think you might want to use dredged materials? A few things you need to know up front: first, is your site historically contaminated? Is the former and proposed land use industrial or commercial? The State does not condone placement of dirty material on clean sites. In the same vein, NJMR does not recommend working on sites that are near residences, schools, churches or parks. Although it may seem obvious, you need to be sure that there is a desire for remediation among the PRPs and the owner. Use of dredged material will require the approval of a remedial action work plan. Is fill or capping required? How much? And finally, is there reasonable barge, rail or truck access?

And before you jump right in on this, there are a few things you need to understand about dredging. First of all, most of the dredged materials are controlled by the Corps and the Port Authority. The Corps contracts low bid, to dredgers, for turnkey operations. Both the Port Authority and the Corps expect that dredging will commence at a rate of 5 to 20,000 cyd/day, as quickly as possible save weather or equipment delays. And no delays due to upland processing equipment. Really large debris is usually removed, like cars and telephone poles, but dredged material contains a host of smaller materials that are difficult on processing equipment. And not the least, there is the Federal Standard. The corps will only pay the equivalent costs of the least cost environmentally acceptable alternative. That option right now is the Newark Bay CDF, with its tipping fee of $29/cyd

So, I think you can see beneficial use is not a “slam dunk”. You need to plan carefully and balance the costs both real and in time, with the potential benefit and revenue. Because land is a very valuable commodity in the Port, and not likely to become any less valuable in the future, the sale of the land is likely to be the driver in any beneficial use scenario. And that will want you to have some assurance that material is coming, and coming fast and steady.

What can the State do to help? Well, this is not a new technology, so demonstration funding is not an option. But we can help explain the dredging schedules and also help with the approval of remedial action plans. We at maritime resources can help with local and federal agency contacts, thereby streamlining the approval process. While we can't make it easy, nor can we make your particular site issue "go away" we can mobilize the State's resources to help you move through to the ever coveted "no further action" letter in as smooth a manner as possible.



Rather than expound on the problems of the upland option, we need to work together to make this program work. The costs of beneficial use may be mitigated through streamlined Corps contracting, improved planning to remove the humps and bumps of supply, improved dredging technology to reduce entrained water. Encouraging multiple vendors through small quantity guaranteed contracts will increase competition and reduce costs. But this requires a much more cooperative spirit between the regional stakeholders than we have had to date. Beneficial use is here to stay, lets make it work to all of our benefit.

What can you do right now? Get your site plans together and have a clear idea of where you want to end up. Prepare your financing plans and know what you need from dredged materials in order to make the project a success. When you feel ready, come visit us. We'll go over your project and see if you're really ready. Also, reach out to the folks at Site Remediation of NJDEP. That way, they will start putting a case team together. Then we'll schedule a preapplication meeting with the Office of Dredging and Sediment Technology to see about an acceptable use determination.

For updates on NJMR projects, please visit us on the web.